

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see remarks, filed 7/11/11, with respect to the rejection(s) of claim(s) 2, 7, 10-13, 17, 18, 24, 25, and 27-30 under 35 U.S.C. 102(b) as being anticipated by Chaney (3,285,261) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Laswick et al. (5,520,170).
2. The applicant is further arguing that the Holben et al. reference fails to disclose that the filter is positioned at the interface of a delivery nozzle and diaphragm as required per the claim language. Chaney discloses the use of a filter in the pathway but does not disclose the filter being located at the interface of the nozzle and diaphragm. Holben et al. disclose the use of a filter at the interface of a nozzle and a valve element therefore per the teaching of Holben et al., the filter element of Chaney is being relocated to the interface of the nozzle and the diaphragm as stated above.
3. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Election/Restrictions

4. Claims 19-22 and 26 have been previously withdrawn per a restriction requirement,

5. Claims 2, 4, 5, 7-18, 24, 25, and 27-30 are being examined in this office action.

Claim Rejections - 35 USC § 102

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claims 2, 7, 10-13, 17, 18, 24, 25, and 27-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Laswick et al. (5,520,170).

Laswick et al. disclose a pneumatic differential pressure valve to supply a quantity of a medium in response to an inhalation breath comprising a nozzle (214) in communication with a pressurized supply (62) of a medium and having a head (216) for delivering the pressurized supply of the medium to a delivery outlet (220); a control chamber (164) capable of being pressurized and then depressurized in response to an inhalation breath; and a diaphragm (218) disposed between the nozzle head and the delivery outlet and controlled by pressure in the control chamber, wherein the diaphragm pneumatically seals the nozzle head when the control chamber is pressurized and pneumatically releases from the nozzle head in response to a reduction in pressure in the control chamber, and wherein the surface area of the nozzle head in contact with the diaphragm is computed so that the diaphragm pneumatically releases from the nozzle head in response to the inhalation breath without mechanical assistance (col. 10, lines 16-37).

Regarding claims 2 and 10, the surface area of the nozzle head is at least 16% of the surface area of the diaphragm in contact with the control chamber as can be seen in Figure 2.

Regarding claim 11, the control chamber of Laswick et al. is capable of being pressurized to at least about 22 psi.

Regarding claim 12, the gas reservoir (30) for the supply gas (col. 4, lines 25-29). The timing gas chamber is the area above nozzle 202.

Regarding claim 27, the pilot valve (204) operates in response to an inhalation breath.

Regarding claims 24, 25, and 30; the method claims are anticipated by the apparatus of Laswick et al.

Regarding claims 17, 18, 28, and 29; per Figure 4 in Laswick et al. the ratio of the opposing pneumatic forces would be less than 1:2.4 and further would be less than 1:2.

Claim Rejections - 35 USC § 103

8. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

9. Claims 4, 8, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Laswick et al. in view of Holben et al. (4,363,424).

Chaney discloses all the features of the claimed invention except that a filter is located at the interface of the nozzle and diaphragm. Holben et al. disclose a filter (162) located in a nozzle section (152) that interfaces with the valve structure (98)(col. 9, line 37 to col. 10, line 10).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to locate a filter at an interface of the nozzle and the valve as

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disclosed by Holben et al. with the valve/nozzle assembly of Laswick et al., since the filtering of air that is to enter a patient would be a priority.

10. Claims 5, 9, 15, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lawick et al. in view of Holben et al. as applied to claim 4 above, and further in view of Danon (5,348,001).

Laswick et al. in combination with Holben et al. disclose all the features of the invention except that the filter has a porosity of 20 micrometers and is made of sintered bronze. Danon disclose utilizing a filter (12) that has a porosity of 20 microns (col. 5, lines 9-11) and is made of sintered bronze (col. 4, line 66 to col. 5, line 4).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize a 20 micron filter as disclosed by Danon in place of the filter of the combined device of Chaney and Holben et al., in order to filter the air to 20 microns.

Regarding claim 16, it would have been obvious to one of ordinary skill in the art to utilize sintered bronze material as disclosed by Danon with the filter of the combined device of Laswick et al. and Holben et al., in order to utilize a commonly available filter material.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CRAIG SCHNEIDER whose telephone number is (571)272-3607. The examiner can normally be reached on M-F 8:00 -4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Hepperle can be reached on (571) 272-4913. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Craig M Schneider/
Primary Examiner, Art Unit 3753
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